Amendments to the Specification

Please amend the paragraph beginning at page 2, line 15, and ending at line 25, as follows.

As the printhead structure, various printheads in which a plurality of printing elements are aligned in one or a plurality of lines have conventionally been known. In a printhead of this type, N printing elements are designed as one block, and several or several ~~ten~~ dozen driving integrated circuits which can be simultaneously driven are mounted on a single board. Image data are aligned in correspondence with printing elements, and arbitrary printing is done on a target printing member (printing medium) such as a paper sheet.

Please amend the paragraph beginning at page 12, line 21, and ending at line 24, as follows.

An "element base" ~~to be described later~~ (to be described later) represents not a mere base formed from silicon semiconductor, but a base having an element, line, and the like.

Please amend the paragraph beginning at page 18, line 4, and ending at line 21, as follows.

The command control unit 120 waits for transmission of a command (step S101), and if it receives a command, determines the type of command (steps S102 and S107). The command 111 in this example is a memory read instruction for reading out driving control information, and the processing advances from step S102 to step S103 (the command is transferred to the memory control unit 121 in Fig. 4). Processes in steps S103 to S106 are executed by the memory control unit 121. In step S103, an address at which information designated by the command is stored is acquired among addresses in the nonvolatile memory (memory block 131) of the head unit 103. In this example, an address at which driving control information is stored is acquired. In step S104, the command control unit 120 generates an access signal (memory read instruction + address) 122 to the memory block 131 so as to read information from the address.

Please amend the paragraph beginning at page 18, line 22, and ending at page 19, line 7, as follows.

Information representing the correspondence between information and its storage address in the memory block 131 is held as a table as shown in Fig. 6 by the memory control unit 121. An address corresponding to information (information identification name) designated by the command 111 is obtained by looking up the table,

and a proper access signal 122 is generated as a control signal. In this example, read of driving control information is designated, and an access signal is so generated as to read information stored at addresses 0xSSSS to 0xTTTT. Driving control information is ~~reads~~ read out from the memory block 131.

Please amend the paragraph beginning at page 21, line 24, and ending at page 22, line 5, as follows.

A plurality of command lines are prepared in accordance with printhead ~~functions,~~ functions; only a necessary function can be controlled at an arbitrary timing. By supplying a minimum command, the carriage control unit can arbitrate commands and feedback-control the printhead function. Even during printing, driving is completely controlled in the carriage by the internal register of the carriage, and the main body control unit can concentrate on image data transfer.

Please amend the paragraph beginning at page 22, line 21, and ending at page 23, line 10, as follows.

As will be described later with reference to Fig. 8, the printing element unit 134 has a plurality of printing elements 1 which are in one-to-one correspondence with circuit elements (to be described later with reference to Fig. 9) in the head driving control unit 132. As will be described later with reference to Fig. 9, the head detection unit 133

incorporates a printhead temperature sensor 12 and a resistance element 11 for correcting and monitoring proper application energy to the printhead. When control is completed, the head detection unit 133 may include a control circuit which ~~functions~~ controls these units. For an arrangement capable of outputting logic, the head detection unit 133 may comprise an arrangement 10 having an analog/digital conversion function of converting an analog output value from the temperature sensor 12 into a digital signal.

Please amend the paragraph beginning at page 40, line 14, and ending at page 41, line 1, as follows.

A case in which the main body control unit or carriage control unit sends a sequence command to the carriage control unit or printhead will be explained. In the sequence command, the most significant bit of "control bits" is "1". If the most significant bit of "control bits" of an input command is determined to be "1", the sequence control unit 221 interprets the sequence command and generates a necessary single-function command line (generates a single-function command line on the basis of the contents of the setting bits) (steps S203 and S204 in Fig. 13). The sequence control unit 221 has a pointer function of designating a single-function command, and if it determines a sequence command, sequentially generates an address pointer.

Please amend the paragraph beginning at page 43, line 25, and ending at page 44, line 6, as follows.

Even a more advanced printhead can be coped with by adding the type of command format, and the command can be kept utilized. More advanced control can also be realized by a sequence command which is a combination of commands. The present invention can be applied regardless of the electrical/mechanical arrangement, software sequence, and the like as ~~far~~ long as the main body apparatus, carriage control unit, and printhead are linked by command communication.

Please amend the paragraph beginning at page 44, line 18, and ending at line 22, as follows.

The liquid is not limited to a printing liquid, and can be a chemical, perfume, or liquid containing a material substance for forming wiring, various functional elements, or the like, as ~~far~~ long as the liquid is discharged and used.